

WHAT IS CLAIMED IS:

1. A method of treating an oil-containing waste water which is produced by washing, with a surfactant, an article bearing at least one fouling component including an oil, and in which said at least one fouling component is finely dispersed in the water by the surfactant, the method comprising the step of:

adding, under a condition that the oil-containing waste water has been adjusted to have a pH value greater than eight and smaller than twelve and have a temperature not higher than 50 °C, a high-cationic flocculant consisting of a high-molecular material which is selected from the group consisting of acrylamide-quaternized or salified dimethylaminoethyl acrylate or methacrylate copolymer, and acrylamide-quaternized or salified dimethylaminoethyl acrylate or methacrylate-acrylic acid copolymer, and which is constituted by a plurality of polymerized units not less than 60 mol% of which have respective cationic functional groups, to the oil-containing waste water, such that a concentration of the high-cationic flocculant in the oil-containing waste water falls in a range of from 100 mg/L to 1,000 mg/L, so that said at least one fouling component dispersed in the water is flocculated to form a sludge consisting of flocks of said at least one fouling component and thereby separate said at least one fouling component and the water from each other.

2. The method according to claim 1, further

comprising a step of introducing the waste water in which the sludge has been formed, into a separating tank, so that the sludge floats on a surface of the waste water.

3. The method according to claim 1, further comprising a step of adding, after the sludge is removed from the waste water in which the sludge has been formed and accordingly said at least one fouling component and the water have been separated from each other, a neutralizer to the waste water to neutralize the waste water.

4. The method according to claim 1, further comprising a step of filtering the oil-containing waste water to remove solid matters such as fibers and dusts, prior to the addition of the high-cationic flocculant.

5. The method according to claim 1, wherein the amount of the flocculant to be added to the oil-containing waste water is determined according to the following formula:

$$P = k \cdot \sqrt{N}$$

where P is an amount (mg/L) of the flocculant to be added; k is a coefficient ranging from 2 to 5; and N is an amount of substance extracted from the waste water by n-hexane.

6. The method according to claim 1, wherein the

pH value of the oil-containing waste water is adjusted by adding sodium metasilicate to the waste water.